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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,881	12/28/2000	Venkatesan Murali	42390P10314	9418
8791	7590	12/23/2004	EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD SEVENTH FLOOR LOS ANGELES, CA 90025-1030			LEE, JOHN D	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/752,881

Applicant(s)

MURALI ET AL.

Examiner

John D. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4 is/are allowed.
- 6) ☒ Claim(s) 1-3, 7, 9, 10, 12, 13, and 14-21 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 8, 11, and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

This Office action is responsive to applicant's amendment submitted with a Certificate of Mailing dated September 29, 2004.

The oath or declaration filed in this application is objected to because the citizenship for inventor Siegfried B. Fleischer has not been given. A new oath or declaration in compliance with 37 C.F.R. § 1.63 is required.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 7, 9, 10, 12, 13, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,454,470 to Dwarkin et al. Dwarkin et al discloses (in Figure 4) a base (coupled to surface #95) having a first opening of a dimension suitable to pass a light emission therethrough; a first side wall coupled to the base and having a second opening (#104) of a dimension suitable to pass a light emission therethrough; a second side wall (#96) coupled to the base and having a reflective component thereon; the base, together with the first and second side walls, defining an interior chamber with the reflective component disposed therein; and a fiber connector (ferrule #100) extending from an exterior of the first side wall adjacent the second opening. Dwarkin et al also discloses first and second converging lenses #108, #110 disposed about the first opening and each defining a principal focus at the reflective component. Further, Dwarkin et al discloses an optical circuit substrate #84; a light emitting source #88 coupled to the substrate; an optical subassembly #80 coupled

to the optical circuit substrate and having an input, output, and a reflective component #96 disposed in a path of the light emitting source; and a fiber optic connector alignment guide (in this case the enlarged portion of receiving ferrule #102, which can be considered a connector) coupled to the output of the subassembly. Dwarkin et al also discloses first and second converging lenses #108, #110 disposed about the first opening and each defining a principal focus at the reflective component; and further discloses PCB #84, which can be used for both transmitters and receivers (see column 4, lines 43-54) and can thus be considered a "transceiver substrate". Still further, Dwarkin et al discloses that the light emitting source may be a VCSEL (see claim 11) which emits light in a perpendicular direction to the substrate (see Figure 4), and thus a VCSEL substrate #86 on which the VCSEL is mounted. Dwarkin et al does not disclose that the VCSEL is mounted on the substrate #86 in such a manner that the perpendicularly emitted light goes *through* an opening in the substrate before the other parts of the coupling apparatus. There is no need for an opening in the substrate in the disclosed embodiment. If, however, the VCSEL of Dwarkin et al were mounted *under* the substrate (in Figure 4), it would make replacement of a failed VCSEL much, much easier, since the apparatus would not have to be disassembled. The operation of the Figure 4 embodiment, with such a bottom-mounted VCSEL, would be otherwise unchanged; there would simply be an opening formed in the substrate so that the light emitted by the VCSEL could pass through the substrate into the other parts of the coupling apparatus. Because this simplification in VCSEL replacement capability would be desired by any person of ordinary skill in the art, the provision of a bottom-mounted

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VCSEL and a corresponding opening in the substrate #86 of Dwarkin et al would have been obvious.

Claims 5, 6, 8, 11, and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The reasons for allowability of these claims remain the same as pointed out in the previous Office action.

Claim 4 is allowable over the prior art of record. The reasons for allowability of this claim, which has been rewritten in independent form, were clearly set forth in the previous Office action.

Applicant's arguments submitted with the response dated September 29, 2004, have been considered, but they are not deemed to be persuasive. Applicant argues that the claimed coupling apparatus is patentably distinct from that of Dwarkin et al because Dwarkin et al does not disclose or suggest receiving or emitting light through an opening in the optical circuit substrate (a limitation newly added to the claims via the latest amendment). This argument is not persuasive as the Examiner has specifically indicated in the body of the rejection (above) *why* it would have been obvious to use a bottom mounted optoelectronic device and emit/receive light through an opening in the optical circuit substrate of Dwarkin et al. The arguments with respect to the Rajasekharan et al reference are persuasive, and rejections based thereupon have been withdrawn.

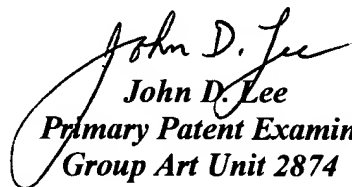
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR § 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and an advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR § 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning the merits of this communication should be directed to Examiner John D. Lee at telephone number (571) 272-2351. The Examiner's normal work schedule is Tuesday through Friday, 6:30 AM to 5:00 PM. Any inquiry of a general or clerical nature (i.e. a request for a missing form or paper, etc.) should be directed to the Technology Center 2800 receptionist at telephone number (571) 272-1562, to the technical support staff supervisor (Team 8) at telephone number (571) 272-1564, or to the Technology Center 2800 Customer Service Office at telephone number (571) 272-1626.


John D. Lee
Primary Patent Examiner
Group Art Unit 2874